IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A method of measuring, in a lithographic projection apparatus having an alignment-measuring device, the overlay between a resist layer, in which a mask pattern is to be imaged, and a substrate, having at least one substrate overlay mark having a periodic structure with a first period ~~p_1~~ and a corresponding resist overlay mark having a periodic structure with a second period ~~p_2~~,

wherein measuring the overlay comprises measuring an interference pattern with the alignment-measuring device of the lithographic projection apparatus, the alignment-measuring device ~~adapted~~ configured to measure the alignment of a substrate alignment mark having a periodic structure with a third period ~~p_s~~, with respect to a reference mark having a periodic structure with a fourth period ~~p_r~~, the interference pattern having a fifth period ~~p_b~~ being generated by illuminating the substrate overlay mark and the resist overlay mark, where the third period p_s is ~~substantially~~ larger than the first and second periods ~~p_1 and p_2, p_r is adapted to p_s, and p_b is adapted to p_r~~.

2. (Currently amended) A method as claimed in claim 1, further comprising using ~~characterized in that use is made of~~ a substrate reference mark having substantially the same period as the interference pattern, imaging the substrate reference mark ~~is imaged~~ on the reference mark, and determining the difference between the positions of the image of the interference pattern and that of the substrate reference mark with respect to the reference mark ~~is determined~~.

3. (Currently amended) A method as claimed in claim 1, further comprising using ~~characterized in that use is made of~~ gratings for the substrate overlay mark, and the resist overlay mark and the reference mark.

4. (Currently amended) A method as claimed in claim 1, wherein ~~characterized in that~~ the resist overlay mark is a latent mark.

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5. (Previously presented) A method as claimed in claim 1, wherein the alignment-measuring device is an on-axis alignment-measuring device, and the reference mark is a mask alignment mark.

6. (Currently amended) A method as claimed in claim 5, wherein ~~characterized in that~~ the interference pattern is imaged on a mask alignment mark via an optical filter, which selects diffraction orders of the radiation from the overlay marks to proceed to said mask alignment mark.

7. (Previously presented) A method as claimed in claim 1, wherein the alignment-measuring device is an off-axis alignment-measuring device.

8. (Currently amended) A method of manufacturing a device ~~devices~~ in at least one layer of ~~substrates~~ a substrate comprising:

aligning, by ~~means of~~ an alignment measuring apparatus with an exposure system, a mask provided with at least one overlay mark with respect to ~~a first~~ the substrate;

imaging, by ~~means of~~ projection radiation, the overlay mark of the mask, in a resist layer on the substrate, to form an overlay mark in the resist layer;

determining an overlay error between the overlay mark formed in the resist layer and an overlay mark in the substrate, and adjusting the exposure system to correct the overlay error;

imaging, by ~~means of~~ projection radiation, a mask pattern comprising pattern features corresponding to device features to be configured in said at least one layer in [[a]] the resist layer on [[each]] the substrate wherein the device features are to be formed, and

removing material from, or adding material to, areas of said at least one layer, which areas are delineated by the mask pattern image;

wherein determining the overlay comprises measuring an interference pattern with the alignment-measuring ~~device~~ apparatus of the exposure system, the alignment-measuring ~~device adapted~~ apparatus configured to measure the alignment of a substrate alignment mark having a periodic structure with a first period ~~p_s~~, with respect to a reference mark having a periodic structure with a second period ~~p_r~~, the interference pattern being generated by illuminating [[a]] the substrate overlay mark having a periodic structure with a third period ~~p_s~~ and ~~a corresponding~~ the resist overlay mark having a ~~period~~ periodic structure with a fourth

period ~~p_2~~, where the first period p_s is ~~substantially~~ larger ~~that~~ than the third and fourth periods ~~p_1 and p_2~~.

9. (Previously presented) The method of Claim 8, wherein the exposure system is a stepping apparatus.

10. (Previously presented) The method of Claim 8, wherein the exposure system is a step-and-scan apparatus.

11. (Previously presented) The method of Claim 8, wherein the substrate overlay mark, the resist overlay mark, and the reference mark each comprise gratings.

12. (Previously presented) The method of Claim 11, wherein the substrate alignment mark comprises a grating.

13. (Currently amended) The method of Claim 8, wherein the alignment-measuring apparatus ~~device~~ is an on-axis device, the reference mark is a mask alignment mark, and the interference pattern is imaged on the mask alignment mark via an optical filter, which selects diffraction orders of the radiation from the overlay marks to proceed to the mask alignment mark.

14. (Currently amended) The method of Claim 13, wherein the resist overlay mark is a latent mark.

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